

**Abstract of the Disclosure**

An improved catalyst for producing carbon fibrils is made by incorporating an effective yield-enhancing amount of a carboxylate into a fibril-forming catalyst. Alternatively, such a catalyst is made by coprecipitating a compound of a metal having fibril-forming catalytic properties and an aluminum and/or magnesium compound, optionally in the presence of carbon particles or carbon fibril aggregates. The catalyst may also be made by incorporating a compound of a fibril-forming metal onto magnesia particles in carbon particles or carbon fibril aggregates. The catalysts, methods of using them to form carbon fibrils and those carbon fibrils are also disclosed.